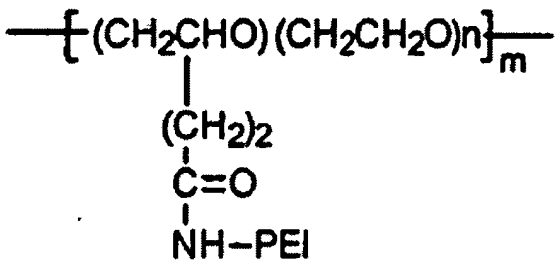
REMARKS

Before this Amendment, claims 1-83 were pending. By this Amendment, claims 65-83 have been canceled in response to the Restriction Requirement. New claims 84-96 have been added. Thus, following entry of this Amendment, claims 1-64 and 84-96 will be pending.

Claims 17, 30, 48, and 56 have been amended along the lines suggested in the Office Action dated September 21, 2004.

Independent claims 1, 31, and 48 have been amended to recite that the carrier molecule consists of a single biocompatible hydrophilic backbone polymer to which the polycationic polymers are linked. Therefore, all of claims 1-64 now carry this limitation. Support for this limitation is found in Figure 1. See, e.g., the right side of Figure 1A, which is shown below.



New claims 84-96 have been added. Support for the recitation of polycationic polymers of PEI having a molecular weight of from about 400 to about 2,000 in the new claims is found in the specification at page 6, lines 24-26 and page 14, lines 14-16. Support for the other PEI molecular weight recitations is found in Table 1 on page 27. Support for the limitations with respect to the linker in claims 93-95 is found in the specification at page 12, lines 22-26, page 13, lines 25-26, and throughout the Examples. Support for the molecular weight limitation with respect to PEG in claim 96 is found in the specification at page 14, lines 9-10.

Claim objections

Claims 17, 30, 48, and 56 were objected to in the Office Action dated September 21, 2004. These claims were amended in an Amendment under 37 C.F.R. §1.116 filed December 16, 2004. An Advisory Action dated January 14, 2005 stated that the Amendment under 37 C.F.R. §1.116 would be entered for purposes of appeal and that the amendments to claims 17, 30, 48, and 56 in the Amendment under 37 C.F.R. §1.116 overcame the objections to these claims.

The present Amendment repeats the amendments to claims 17, 30, 48, and 56 from the Amendment under 37 C.F.R. §1.116. Accordingly, it is believed that these objections have been overcome and it is respectfully requested that they be withdrawn.

The currently pending rejections

Claims 1-64 were rejected in the Office Action dated September 21, 2004 under 35 U.S.C. §§102 and 103. The Advisory Action dated January 14, 2005 stated:

> However, it is noted that the rejections could be overcome by limiting the claims to a carrier molecule consisting of a single PEG polymer to which several pendant PEI molecules are covalently attached.

The Applicant remains convinced that the rejections of claims 1-64 under 35 U.S.C. §§102 and 103 in the Office Action dated September 21, 2004 are incorrect and reserves the right to contest this rejection in continuing applications. However, in the interests of expediting issuance of the currently amended claims, the Applicant has adopted the suggestion in the Advisory Action and amended the claims such that claims 1-64 now specify that the carrier molecule consists of a single biocompatible hydrophilic backbone polymer to which the polycationic polymers are linked.

In view of this, it is respectfully requested that these rejections be withdrawn.

New claims 84-96

New claims 84-96 recite that the biocompatible hydrophilic backbone polymer is polyethylene glycol (PEG) and the polycationic polymer is polyethyleneimine (PEI) that has a molecular weight in the range of from about 400 to about 2,000 daltons. The carrier molecules of the present invention which have polycationic polymers of PEI having a molecular weight of from about 400 to about 2,000 daltons produce surprising and superior results. Before the present invention, it was thought that PEIs of such low molecular weight would not be effective. See the specification at page 4, lines 10-12: "Small sized PEIs are

much less toxic but unfortunately low molecular weights PEIs (less than 2,000 Daltons) were found to produce no or very low transfection activities in various conditions." Despite this expectation, the Applicant has shown an inventive step by demonstrating that these low molecular weight PEIs are effective in DNA transfection when combined with a biocompatible hydrophilic backbone polymer to form the carriers of the present invention. Table 1 on page 27 of the specification shows that PEG-8PA-GFLG-PEI400, PEG-15PA-PEI800, PEG-8PA-PEI800, PEG-10PA-PEI1200, PEG-8PA-PEI2K, PEG-15PA-GFLG-PEI800, and PEG-8PA-PEI2K gave positive results for transfection. As disclosed in the Examples, all of these carriers contain PEI within the range of 400 to 2,000 daltons. In view of this, new claims 84-92 are non-obvious.

The time for filing an Appeal Brief was set for February 20, 2005. Enclosed is a Petition for the Extension of Time under 37 C.F.R. § 1.136(a) for a period sufficient to permit the filing of this response.

The Applicant hereby also makes a Conditional Petition for any relief available to correct any defect seen in connection with this filing, or any defect seen to be remaining in this application after this filing. The Commissioner is authorized to charge Kenyon &

Kenyon's Deposit Account No. 11-0600 for any fees associated with such Conditional Petition.

Respectfully submitted,

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